MATH 175
Trigonometry and Analytic Geometry

Course description: Trigonometry, circular functions, and analytic geometry. This course has been identified as a general education course.

Co-requisite or prerequisite: MATH 170, or permission of department head.

Text: *Precalculus* by Michael Sullivan, 8th Edition, Prentice Hall.

Calculator: The *Casio 9750G Plus* will be used for classroom demonstrations. It is recommended that you check with the instructor before using a calculator other than the *Casio 9750G Plus* for this class. Some testing will be conducted without the use of the calculator.

For details about **your** instructor's contact information, office hours, and policies, go to http://www.faculty.mcneese.edu/ and access your instructor's website.

General Education Competency

The General Education Competency assessed in this course: To understand numerical data and statistics

Student Learning Outcomes

The student will be able to:

- collect, organize, and interpret numerical data in various forms;
- demonstrate computational skills necessary for problem solving and mathematical modeling;
- create, interpret, and revise models to solve problems;
- demonstrate knowledge and skills specific to course content as outlined in the objectives listed below.

Objectives

The student will be able to

- convert angle measures between degrees, minutes, seconds and decimal degrees, and between degrees and radians;
- find exact values of trigonometric functions of points on the unit circle, quadrantal angles, and integral multiples of $\pi/6=30°$, $\pi/4=45°$, and $\pi/3=60°$;
- determine domain and range, period, and sign of trigonometric functions;
- find values of trigonometric functions using fundamental identities;
- graph trigonometric functions;
- find values of inverse trigonometric functions;
- establish trigonometric identities;

- solve trigonometric equations;
- solve right triangles;
- solve triangles using Law of Sines and Law of Cosines;
- convert between rectangular and polar coordinates;
- graph polar equations;
- use DeMoivre's Theorem and find complex roots of equations;
- graph and perform operations with vectors;
- graph and write equations of parabolas, hyperbolas, and ellipses.

Course material

Course material will include the following topics:

TOPIC	CHPT.	SECTIONS	APPROX. TIME
Trigonometric functions	Ch. 6	1–5	~ 3 weeks
Analytic trigonometry	Ch. 7	all	~ 4 weeks
Applications of trigonometric functions	Ch. 8	all	~ 2.5 weeks
Polar coordinates: vectors	Ch. 9	1–4 (5–7 optional)	~ 2.5 weeks
Analytic geometry	Ch. 10	1–4 (5, 7 optional)	~ 1.5 weeks

Assessment

The Semester score for the course will be calculated by using the weights (%) indicated below:

WEIGHT (%)			
75%	Semester average	Tests	_____ %
		Assignments	_____ %
		_____	_____ %
25%	Final exam grade		

The Semester letter grade in the course will be assigned according to the scale below:

SEMESTER GRADE	SEMESTER SCORE
90–100	A
80–89	B
70–79	C
60–69	D
0–59	F

Notes:

1. The student is expected to attend regularly and punctually. A student with excessive absences (25% of scheduled classes, either excused or unexcused) will be given an appropriate grade of F.

2. The final exam will be constructed according to guidelines established by the department.
3. In cases of an **excused** absence, the instructor reserves the right to reweight the final exam in lieu of a make-up test.
4. In the case where a student's score on his final exam indicates **exceptional achievement** above and beyond that indicated by the semester average, the instructor reserves the right to reweight the value of the final exam in computing the semester grade.

Please read the Department's Attendance Policy.

Instructor's office hours can be found on the MSU web site at
http://www.faculty.mcneese.edu/
Click on individual instructor to view their web page. Or navigate from MSU Home Page; select *Faculty & Staff*, select *Faculty Web Server*.

Students should visit the MSU web page at
http://www.mcneese.edu/policy/diversity.htm
for information about diversity awareness and sexual harassment policies and procedures, as well as the Americans with Disabilities Act.

Students should also visit the MSU web page at
http://www.mcneese.edu/integrity
for information on the Academic Integrity Policy.

ANY STUDENT WITH A DISABILITY IS ENCOURAGED TO CONTACT THE OFFICE OF SERVICES FOR STUDENTS WITH DISABILITIES IN DREW HALL, ROOM 200, VOICE (337) 475-5916, HEARING IMPAIRED (337) 475-5722. IT IS EACH STUDENT'S RESPONSIBILITY TO REGISTER WITH THE OFFICE OF SERVICES FOR STUDENTS WITH DISABILITIES WHEN REQUESTING A REASONABLE ACCOMMODATION.

One week of summer school is equivalent to 2 ½ weeks of Fall or Spring classes

DMCS
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